

Claims:

1. An injection molding machine having a fixed platen and a movable platen movable toward and away from the fixed platen, the machine including a turret having a plurality of faces and positioned between the fixed and movable platens, the turret being rotatable about an axis perpendicular to the direction of movement of the movable platen to bring different faces of the turret into alignment with the fixed platen, the fixed platen and at least two opposed the turret faces having complementary mold halves that when closed define between them the desired shape of a part to be molded, the turret including an actuator for moving the turret in the direction of movement of the movable platen between a molding position in which the mold halves of one turret face and the complementary mold halves of the fixed platen are closed on each other and an open position in which the turret may rotate about its axis of rotation, said actuators being capable of so moving said turret or of not moving said turret independently of the movement of the movable platen, whereupon the movable platen may be moved away from the turret without opening the mold to enable access to a previously molded part at the opposite face of the turret.
2. The machine of claim 1 wherein said movable platen includes a plate recessed to accommodate the mold halves and molded parts borne by a first turret face after said parts have been molded and the turret has been rotated to orient said face opposite to the turret face facing the fixed platen.
3. The machine of claim 1 wherein said actuator extends between said turret and said fixed platen.

4. The machine of claim 1 wherein said actuator comprises at least two hydraulic, pneumatic, or electric linear actuators carried at opposite sides of the turret and capable of together moving said turret out of engagement with the fixed platen independently of movement of said movable platen.

5. A method for rapidly injection molding parts in an injection molding machine having fixed and movable platens, and a rotatable turret between the platens and having at least two oppositely facing faces bearing mold halves complementary to a mold half borne by the fixed platen, the method including closing the movable platen on the turret and fixed platen to close the mold formed by the complementary mold halves carried by the fixed platen and one of the turret faces, injecting molten plastic into the closed mold, maintaining the closed mold under pressure for the duration of the injection, pack and hold period, and withdrawing the movable platen from the turret without opening the mold to enable further processing of a previously molded part carried by the opposed turret face.

6. The method of claim 5 wherein withdrawal of the movable platen from the turret exposes said previously molded part.

7. The method of claim 6 wherein, following withdrawal of the movable platen from the turret to expose said previously molded part, that part is ejected from the machine.

8. The method of claim 6 including moving said exposed, previously molded part to a different mold half carried by the said opposed turret face.

9. The method of claim 8 including subsequently opening the closed mold, and rotating the turret to bring said opposed turret face and its mold halves into alignment

with said fixed platen, closing the mold by moving the movable platen and the turret toward the fixed platen.

10. The method of claim 9 including subsequently injecting plastic into the closed mold and into contact with said previously molded part.